

**Notice of Allowability**

Application No.

09/746,277

Applicant(s)

MAIN ET AL.

Examiner

Art Unit

Ted M. Wang

2634

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/4/2005.
2. ☒ The allowed claim(s) is/are 1,5-11,13-15 and 18-27.
3. ☒ The drawings filed on 21 December 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                   |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date <u>6/15/2005</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance                          |
|   | 9. <input type="checkbox"/> Other _____   |

***Examiner Amendments***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Robert King on June 15, 2005.

3. The application has been amended as follows:

4. In the claims:

- In claim 1, line 18, change "the" to --- a --- after "receiving".
- In claim 15, lines 7 and 13, change "the" to --- a --- after "receiving", respectively.
- In claims 20 and 22, lines 3 and 6, insert --- supply --- after "power".
- In claim 21, line 3, change the second occurrence of "a" to -- the --, and line 3 and 7, insert -- supply -- after "power".
- In claim 27, amend the claim to the following:

27. A method of generating an Automatic Frequency Control (AFC) signal having a deadband region in a demodulator, comprising:  
transferring a first current signal received at a first input to an output through a first path;  
transferring a second current signal received at a second input to the output through a second path for combining with the first signal in generating the AFC signal;

tuning the demodulator ~~when a phase detected output of an input signal~~  
~~exceeds~~ relative to a threshold value determined by relative sizes of  
transistors that form current mirrors in a tuning circuit of the ~~modulator~~  
demodulator; and  
maintaining the AFC signal in the dead band region until a difference in the  
first current signal and the second current signal ~~allowing only that portion of~~  
~~the AFC signal that exceeds the threshold value~~ in either polarity to upon  
which the AFC signal is serially pass passed to an AFC filter and an  
oscillator.

***Allowable Subject Matter***

5. Claims 1, 5-11, 13-15, and 18-27 are allowed.
6. The following is an examiner's statement of reasons for allowance.
7. The following is an examiner's statement of reasons for allowance.
  - The reasons for allowance of claims 1, 5-11, 13-15, 18-23, and 25-26 have been addressed in office action filed on 3/15/2004.
  - The prior art fails to teach an apparatus of Claims 24 and 27 that specifically comprises the following:
    - The instant application is deemed to be directed to a non-obvious improvement over the invention patented in Pat. No. 4,578,594, 4,370,520, 5,650,749, and 6,023,491. The improvement comprises the limitation "exceeding a threshold in the AFC before generating the dead band region by transferring the first and second signal to the output" as recited.

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Pat. No. 4,578,594, 4,370,520, 5,650,749, and 6,023,491 fail to teach above described limitation individually or in combination.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M Wang whose telephone number is (571) 272-3053. The examiner can normally be reached on 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3053. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Ted M Wang

Examiner

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Ted M. Wang

**SHUWANG LIU  
PRIMARY EXAMINER**